

REMARKS

This Amendment addresses the issues outstanding from the final Office Action dated October 7, 2008.

Applicants respectfully request favorable reconsideration of this application, as amended.

Claim 14 has been amended to address the alleged informalities. Minor editorial modifications have been made to Claims 8 and 12, to better place them in form for allowance. Claim 7 has been canceled. Claims 17-23 have been added. As a result of the foregoing actions, all having been taken without prejudice or disclaimer, Claims 1-6, 8-9, and 12-23 are pending further consideration.

Turning to the merits, Claims 1-9 and 12-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,727,875 to Dory (Dory) in view of U.S. Patent No. 5,160,336 to Favre (Favre). Further, Claims 1-9 and 12-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dory in view of U.S. Patent No. 6,036,661 to Schwarze et al. (Schwarze).

Without acceding to the outstanding rejections, independent Claims 1 and 13 have been amended to incorporate subject matter previously addressed by dependent Claim 7 (now canceled). Specifically, each of independent Claims 1 and 13 has been amended to recite that the exit boundary surface of the transmission element travels a stroke of less than 0.5 millimeters due to the impact member hitting the entry boundary surface of the transmission element.

The primary reference, Dory, fails to teach or suggest an exit boundary surface of a transmission element travelling a stroke of less than 0.5 millimeters due to an impact member hitting an entry boundary surface of the transmission element.

In addition to its apparent deficiency with respect to the above-discussed feature of Applicants' invention, Dory neither teaches nor suggests an inwardly curved exit boundary surface for pressure wave coupling into biological tissue, and an exponential horn-shaped transmission element having a larger diameter at an exit boundary surface than at an axially opposite entry boundary surface, as recited in Claims 1, 13, and 15-16 as previously presented (and as currently presented).

The secondary references, Favre and Schwarze, fail to supply the above-discussed deficiencies. Note that, contrary to the Office's assertion, Favre neither teaches nor suggests a medical instrument where an exit boundary surface of a transmission element travels a stroke of less than 0.5 millimeters due to the impulse. Indeed, Favre teaches maximizing the waveguide (4) elongation resulting from a shock wave. See Favre column 3, lines 17-20. Note further, for example, that the various embodiments of the transmission element in Favre do not include an inwardly curved outer boundary surface for coupling and focusing extracorporeal pressure waves. Rather, additional reflectors are necessarily used to achieve coupling and focusing of the waves. Note further, for example, that the use of reflectors and lenses for focusing, as taught by Schwarze, corresponds to the solutions of Favre and Dory, respectively. These solutions involve aspects of distinct elements that are used in conjunction with a transmission element, rather than aspects of the transmission element itself.

Claims 1 and 13 thus distinguish patentability from the applied references. Accordingly, Claims 1 and 13 are allowable, as are their respective dependent claims.

Regarding the rejection of Claim 6, Applicants respectfully traverse. Note that, in contrast to Applicants' claimed invention for generating extracorporeal pressure waves, the embodiment of Favre Figure 1 is directed to a device which is introduced invasively

into a patient's body and brought into direct contact with a kidney stone, for example, that is to be destroyed. Accordingly, one of ordinary skill in the art would have had no reason to modify the pulse generator of Dory by adding a damping element as in Favre, to achieve Applicants' function of returning the transmission element to its original position following termination of impact action. Therefore, Favre is not understood as teaching or suggesting Applicants' spring/damping element as recited in Claim 6. The rejection of Claim 6 should be withdrawn accordingly.

Regarding the rejection of Claim 8, Applicants respectfully traverse. As previously discussed, Dory lens (103) is not a transmission element but rather, a transforming and focusing element. Dory, therefore, fails to teach or suggest an intermediate element arranged between an impact member and a transmission element as recited in Claim 8. The rejection of Claim 8 should be withdrawn accordingly.

Regarding the rejection of Claim 9, Applicants respectfully traverse. As previously discussed, Dory lens (103) is not a transmission element but rather, a transforming and focusing element. Moreover, Dory Figure 1 does not indicate that the outer edges of lens (103) are either rounded or provided with a protective coating. Dory, therefore, fails to teach or suggest a an exit boundary surface of a transmission element with outer edges that are rounded or provided with a protective coating as recited in Claim 9. The rejection of Claim 9 should be withdrawn accordingly.

New independent Claim 17 has been added to provide more comprehensive protection for certain aspects of Applicants' invention and is believed to be allowable. Claim 17 recites, *inter alia*, a medical instrument having a transmission element formed such that the transmission element, the entry boundary surface, and the exit boundary surface constitute a one-piece body. Such a one-piece configuration provides for loss-

free transmission of planar waves from smaller cross sections to larger ones. See, e.g., Applicants' Figures 1-2 and 4-6, and specification paragraphs 14, 20-23, and 25-26.

The applied references fail to teach or suggest a transmission element formed such that the transmission element, the entry boundary surface, and the exit boundary surface constitute a one-piece body. Note, for example, that Dory teaches an anvil (1) that is struck on one face and transmits a wave that is then transformed and focused by a lens (103), which is fixed to an opposite face of the anvil. See Dory column 3, lines 3-23. As discussed previously, Dory, Favre, and Schwarze teach aspects of various reflectors and lenses, the reflectors and lenses being distinct elements used in conjunction with a transmission element, rather than being part of the transmission element itself.

Accordingly, Claim 17 distinguishes patentably from the applied references and should be allowed.

Newly added Claims 18-23 depend from Claim 17 and are allowable, at least for the reasons discussed previously with respect to Claim 17.

In view of the present amendments and the above discussion, this application is clearly in condition for allowance and should now be passed to issue.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 (T4494-16088US01) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be

required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

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